EPAM Cloud Orchestrator

Features Overview
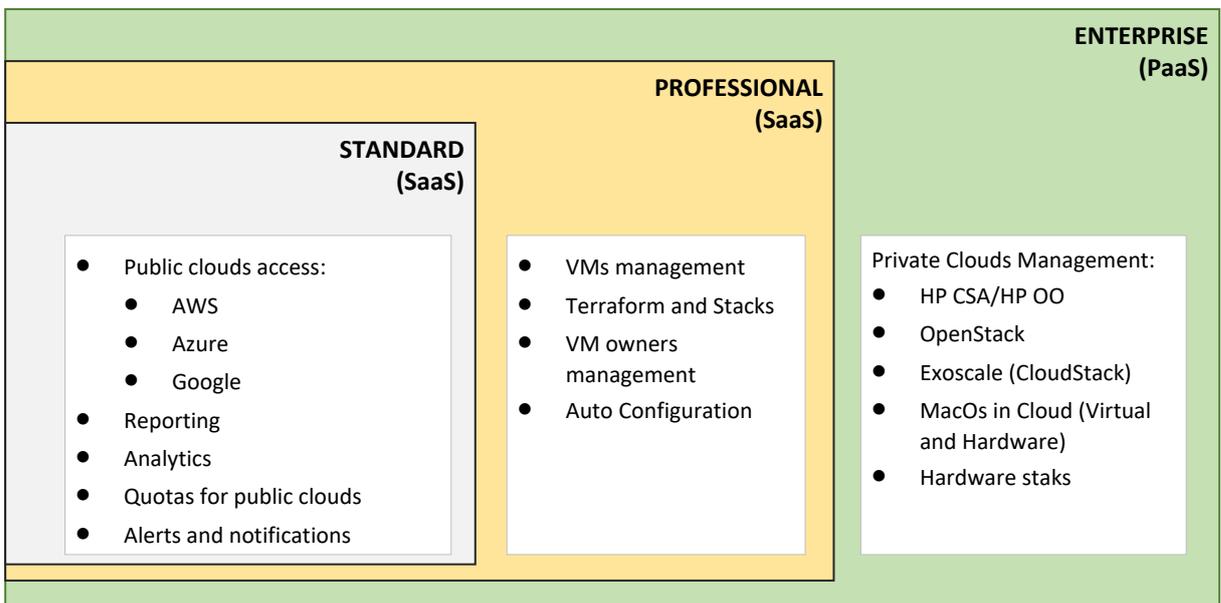
Short Guide

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INTRODUCING EPAM CLOUD ORCHESTRATOR

EPAM Cloud Orchestrator is a solution that allows to manage, control and monitor virtual infrastructures across public and private clouds.

EPAM Cloud Orchestrator is the result of over six years of EPAM's experience in building hybrid cloud management solutions. It allows users to create, manage, monitor and control virtual infrastructures in terms of self-service, with minimum interaction with the IT operations teams.

It works across multiple cloud platforms, including public cloud providers and virtualization platforms for building private clouds.

EPAM Orchestrator is provided in three options, and the choice depends on the customer's business needs:

ENTERPRISE (PaaS)

PROFESSIONAL (SaaS)

STANDARD (SaaS)

- Public clouds access:
  - AWS
  - Azure
  - Google
- Reporting
- Analytics
- Quotas for public clouds
- Alerts and notifications

- VMs management
- Terraform and Stacks
- VM owners management
- Auto Configuration

Private Clouds Management:
- HP CSA/HP OO
- OpenStack
- Exoscale (CloudStack)
- MacOs in Cloud (Virtual and Hardware)
- Hardware staks

- **The Standard Deployment** model is based on the Software as a Service approach, where the customer is registered under EPAM Orchestrator, and is provided with the following facilities:
  - A single entry point to the unified and simply organized reporting for all customer's resources across all public clouds they use.
  - A set of analytics tools for all virtual resources under the customer's account. This includes analytics on VM and tenant levels.
  - Quotas management tool, that allows to set up the monthly expense limits for virtual infrastructures and the scenarios for different stages of quotas depletion.
  - Alerts and notifications that will inform the customer on the significant events on their resources.
- **The Professional Deployment** model is based on the Software as a Service approach, where the customer is registered under EPAM Orchestrator, and is provided with all the facilities of the Standard model, complemented with the following:
  - Virtual machines management. A VM can be ordered in several clicks, and the process is unified for all the supported clouds.

- o Using Terraform and other stacks solutions to automate infrastructure management.
  - o Managing virtual machines owners. This allows to set up the higher level of control on the infrastructure events, and better cooperation with the responsible persons.
  - o Auto configuration for complex automated infrastructure setup.
- **The Enterprise Deployment** model is provided as Platform as a Service solution. EPAM Orchestrator is set up on the customer's side, and includes all the features of the Standard and Professional models, as well as the ability to set up private virtual regions. Private regions can use the following technologies:
  - o HP OO/ HP CSA
  - o OpenStack
  - o Special setup for MacOs provisioning (including virtual and hardware Mac instances)
  - o Ability to manage (register, monitor) hardware resources.

The Enterprise deployment model also includes a set of additional features on different layers of the solution. This document describes the main features for PaaS and SaaS models of EPAM Orchestrator provisioning, and allows to compare the feature sets.

EPAM CLOUD ORCHESTRATOR FEATURES OVERVIEW

EPAM Orchestrator is a complex multi-layer service providing its users the full scope of facilities for creating, manipulating, and monitoring resources in a hybrid cloud, in terms of self-service.

This short guide is dedicated to brief overviews of EPAM Cloud's main features and services

Feature	Description	Availability		
Main Points		Standard	Professional	Enterprise
Quick Start	A project is activated in Cloud within several hours after the respective request is submitted. After that, project members automatically get permissions for performing operations (depending on their project role) in Cloud.	+	+	+
Multi-Platform	The user can select among several Cloud platforms (EPAM, AWS, Azure), according to project's and customer's needs and requirements. One can access external Cloud platforms using EPAM Orchestration or native platform tools, and engage both EPAM and hosting platform's facilities to get the best of Cloud.	+	+	+

Feature	Description	Availability		
Main Points		Standard	Professional	Enterprise
Cloud UI: Desktop and Mobile Access	EPAM Cloud tools set includes Cloud Management Console, a Web-UI solution that gives access to Orchestration for any user who has internet connection, no matter whether they are in- or outside the corporate network. Having both desktop and mobile interfaces, Cloud Management Console makes your Cloud available for you at 24/7 basis, and you can access Orchestrator with your mobile device from any public network. Both interfaces have recognizable layout, so switching from one to the other is easy and does not require much time and effort	+	+	+
Unified Tools	EPAM Cloud users can perform infrastructure management, monitoring and reporting operations using the same set of UI and CLI tools, irrespective of the platform on which the resources are hosted. Meanwhile, distinguishing between platforms is quick and easy, if needed.	+	+	+
Resources provisioning and setup				
Virtual resource provisioning	Virtual resources and related to their maintenance and monitoring default services are provisioned by user's call without need to address Support teams.	-	+	+
Out-of-the-box and custom packages	Users can order virtual resources based on pre-defined packages, or using their own custom ones. It is also possible to clone existing resources together with all data and settings.	-	+	+

Feature	Description	Availability		
Main Points		**Standard**	**Professional**	**Enterprise**
Scheduled resources control	One can set up schedules that will make Orchestrator automatically stop and start their project's instances according to specific rules. This allows to significantly decrease project costs, as passive resources are cheaper than active ones, and decreases infrastructure load, which results into better performance.	-	+	+
Storage Control	Each virtual server comes with a default storage. However, if this is not enough, the user can always get hard disk extension by requesting new storage volumes of the necessary size	-	+	+
Tagging	EPAM Cloud Orchestrator uses the same restrictions as the external cloud providers.	-	+	+
Ownership	EPAM Orchestrator provides the information on the owner of the selected VM.	+	+	+
Alerts and Notifications	EPAM Cloud Orchestrator maintains an email notifications system providing the details on each notification reason.	+	+	+
Automated configuration	Provisioned resources are configured in a necessary way automatically – by default or by user's call. Configuration settings are provisioned in pre-defined sets (from the library or custom ones), so that the user just needs to select a necessary one, and all the configuration processes are performed automatically.	-	-	+
Automated services setup	Services are pre-configured applications designed to facilitate your work with Cloud. A user can initiate automatic deployment of such application to Cloud, in order to use this application for project needs.	-	-	+
Quick Recovery	EPAM Cloud supports checkpoints – instance recovery points to which one can revert their resource in case some critical change had unpredicted effect.	-	-	+

Feature	Description	Availability		
Main Points		**Standard**	**Professional**	**Enterprise**
Free personal resources	EPAM Cloud allows its users to have resources under personal projects, free of charge, for educational, investigational and training purposes.	-	-	+
Advanced Manager's Tools				
Permissions control	By default, user's permissions in Cloud are defined by their role on the project. However, it is possible to customize permissions for a specific user or for a group of users with the same project role.	+	+	+
Assets control	EPAM Orchestrator's tool allow to view the list of all your project's resources, the information on their owners, state, events and the people who introduce changes to them. This allows to quickly investigate any event in infrastructure, find the responsible people and recollect the course of events.	+	+	+
Cloud Analytics	EPAM Orchestrator supports a wide set of analytical tools that allow to collect and process information about existing Cloud infrastructures. Cloud Analytics works with a wide range of infrastructure information, covering every level: from general EPAM Cloud statistics, to project and region details, and performance monitoring of each specific VM. The user can establish their own set of preferred metrics that will be accessible "at hand" – on the main Cloud Dashboard, so that there will be no need to dive into the Analytics tools each time they need the metrics' details.	+	+	+

Feature	Description	Availability		
Main Points		**Standard**	**Professional**	**Enterprise**
Billing and Reporting				
Expenses Control	For private regions, you can get preliminary estimations of your resources before you order them, and find the best way to organize your infrastructure in Cloud. Besides this, EPAM Orchestrator allows to specify the amount of money (quota) a project can spend on Cloud resources each month, and these settings can be distinguished by Cloud provider or specific region. Quotas control mechanisms send notifications at different stages of quota usage, and can stop existing resources and block new resources creation if a quota is depleted.	+	+	+
Unified and detailed reporting	EPAM Cloud provides a convenient intuitive interface that gives access to your project's billing information at any time, within several clicks. Every month, project key staff gets a detailed report on their projects' resource and services utilization, as well as recommendations on infrastructure optimization.	+	+	+
Service Delivery Details				
Deployment Framework	The Deployment framework is designed for deploying EPAM Orchestrator SaaS to the AWS account of the customer.	-	-	+
Admin CLI	Admin CLI provides deep-dive access to EPAM Orchestrator settings and configurations, allows managing tenants and users. It is a separate tool that is not available for regular Orchestrator users and can be reached by authorized admin users only.	-	-	+
Customizable Automation	Automation experts can create custom scenarios for automating infrastructure delivery and setup processes for your project.	-	+	+

Feature	Description	Availability		
Main Points		**Standard**	**Professional**	**Enterprise**
API Gateway	One can use the provided Maestro API to send direct calls to Orchestrator	-	+	+
Maestro CLI	Maestro CLI provides access to full functionality of EPAM Orchestrator, including the operations and options, not supported by UI.	-	-	+
Cloud Support and Knowledge Sharing				
24/7 Support	Cloud Support team works 24/7 to make sure that your issues will be solved quickly and effectively. You can submit a support request via Cloud Dashboard, support.epam.com, or by sending an email directly to the team.	-	+	+
Detailed knowledge base	EPAM Cloud is a self-service, and to be effective, it needs to be precisely documented. Our knowledge base includes Confluence pages, Site, and PDF documents that provide functionality descriptions, guidelines, examples, answers to the most frequently asked questions – all the information that is needed to work with EPAM Cloud. The provided documentation base is organized in such a way, that any user can find useful information, irrespective of their expertise and project role. If anything remains unclear, Cloud Consulting group is always ready to answer your questions.	+	+	+
Trainings by request	EPAM Cloud Consulting team provides personal trainings for project managers and group trainings for project teams, to help them get the feel of Cloud Computing in shortest terms. The trainings go by requestors' needs, initial expertise and goals, and are accompanied by presentations, handouts, home tasks, and after-training consulting, if needed.	-	-	+

VERSION HISTORY

Version	Date	Summary
2.1	April 20, 2018	– Described deployment options
2.0	January 15, 2018	– Updated with the EP SaaS details
1.1	December 16, 2016	– Classification changed from Confidential to Public, approved by Dzmitry Pliushch
1	January 20, 2016	– First published